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ABSTRACT

Major goals and tasks for the next three years are listed in this draft concept and guide for fostering development of library resource sharing in the Western United States and Canada. Major concepts, such as bibliographic utility and service center, are defined and 24 underlying assumptions regarding the environment for networking are set forth. Among the eight goals discussed are: (1) improving the effectiveness of the organizations contributing to the development of regional and national resource sharing systems; and (2) designing and developing a prototype telecommunications network that interconnects the bibliographic utilities, service centers, and libraries. Strategies to accomplish the goals are given along with specific tasks to be accomplished by the Western Interstate Library Coordinating Organization (WILCO), by the Western Council of State Librarians, and by other organizations. (PF)

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LIBRARY NETWORKING IN THE WEST: THE NEXT THREE YEARS

A Working Paper Describing Goals and Tasks
to which Western Library Organizations
are Committed to Foster
Interstate Resource Sharing

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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FIFTH DRAFT
22 September 1976

This document has been prepared by the staff of the Western Interstate Library Coordinating Organization in collaboration with representatives of the Western Council of State Librarians (H. Vincent Anderson and Roderick Swartz); BALLOTS and the Stanford University Libraries (Hank Epstein and David Weber); Bibliographical Center for Research (Donald Simpson); California State Library (Gerald Newton); Ohio College Library Center (H. Paul Schrank); Pacific Northwest Bibliographic Center (Earle Thompson, University of Montana, and Lura Currier); Washington Library Network (Mary Jane Reed); and Gerald A Rudolph, University of Nebraska.

The fifth draft contains revisions suggested by the following reviewers: Page Ackerman, University of California at Los Angeles; Kenneth Allen, Eugene Llewellyn, Marion Milczewski, University of Washington; Norman Alexander, Southern Oregon College; Joanne Arnold, WICHE Commissioner, University of Colorado; Russell Davis, Utah State Librarian; Roger Hanson, University of Utah; Donald Hendricks, TALON Regional Medical Library; James Kennedy, AMIGOS Bibliographic Council; W. David Laird, University of Arizona; Marcia Lowell, Oregon State Librarian; Theodore Ryberg, University of Alaska; Alexi Shuman, Nebraska State Library Commission; Margaret Warden, State Senator, Montana.

This draft is being distributed widely for review by librarians and other interested persons who have not yet had the opportunity to comment on these goals and tasks to guide western library resource sharing.

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ABSTRACT

This draft concept and guide for fostering development of library resource sharing in the West over the next three years lists major goals and tasks, together with underlying assumptions regarding the environment for networking. The paper indicates what needs to be done, and by whom, to meet the requirements of western librarians for bibliographic and information access support via networking. This draft is being distributed for comment and suggested revisions, which should be sent to WILCO, WICHE, P. O. Drawer P, Boulder, Colorado 80302.

TABLE OF CONTENTS

I. INTRODUCTION

II. DEFINITIONS

III. CONCEPT OF THE INTEGRATED BIBLIOGRAPHIC COLLABORATIVE

IV. GOALS AND STRATEGIES FOR ACCOMPLISHING THEM

V. ASSUMPTIONS

VI. SCHEDULES

I. INTRODUCTION

The purposes of this document are to:

1) review the goals for the development of an integrated bibliographic collaborative for the West (defined as the complex of libraries and networking organizations cooperating in a coordinated manner to facilitate library resource sharing);

2) air the assumptions underlying this concept of the coordinated bibliographic collaborative;

3) establish a list of tasks and responsibilities for undertaking them, for improving and extending the usefulness of the bibliographic collaborative over the next three years.

The paper is preliminary and should be considered a draft. It is intended to stimulate conversation and provide a mechanism through which decision makers can focus on planning for the future. The paper has purposely been kept as brief as possible to encourage recipients to read and consider it thoroughly. Your comments and suggestions are solicited; please send them to WILCO, WICHE, P.O. Drawer P, Boulder, Colorado 80302 (or telephone Eleanor Montague or Karl Pearson at 303-492-7317). You may wish to provide a copy of your comments to your state librarian and to appropriate organizations listed on the cover of this document.

It may be useful if in studying this document the reader also referred to A Review of Potential Components for the Western Bibliographic Network (Karl Pearson and the Project Staff, WICHE, March 5, 1976, Catalog #2B121), for a discussion of the various organizations in the West currently providing services and products.

This document is an outcome of work supported by the Western Council of State Librarians and the Council on Library Resources (CLR Grant 614), and performed by the individuals named on the cover who have graciously given freely of their time and knowledge.

II. DEFINITIONS

Bibliographic utility: An organization offering computer-based support for technical and public service operations to a number of libraries. The bibliographic utilities considered in this document are: BALLOTS and the computer operation portion of OCLC and the Washington Library Network. Commercial vendors of cataloging and on-line retrieval services can also be considered as utilities. The Library of Congress (LC) may also act as a utility in the near future in allowing access to its on-line files. Note that the same organization may have both a utility component and a service center or networking component (e.g., WLN, OCLC).

Service center: An organization assisting library resource sharing by acting as a distributor or broker of computer-based services from one or more bibliographic utilities in a particular region, or the operator of other bibliographic services such as maintaining a union file of location information or a photocopy center. The service centers considered in this document are: AMIGOS

Bibliographic Council, Bibliographical Center for Research (BCR), the California State Library's Union Catalog (CSLUC), California Library Authority for Systems and Services (CLASS), the Pacific Northwest Bibliographic Center (PNBC), and the resource-sharing portion of the Washington Library Network (WLN). Service centers may also be called library networks.

Western Council: The group of State Librarians in the West that currently fund and direct the Western Interstate Library Coordinating Organization (WILCO). Currently there are nine members of the Council: the State Librarians of Alaska, Arizona, California, Idaho, Montana, Nevada, Oregon, South Dakota, and Washington. These State Librarians are responsible for representing the interests of all librarians within their states and for coordinating state resource sharing activities with similar activities in other states and adjacent Canadian provinces. The seventeen westernmost states and the western provinces of Canada are eligible for membership in the Western Council.

Western Interstate Library Coordinating Organization (WILCO): WILCO, as an organization, consists of the Western Council, advisors, and a small staff. It provides a forum and a catalyst for coordinating and facilitating library resource sharing activities among the western states and Canadian provinces. WILCO provides a vehicle for the expression of common interests and concerns among western librarians in respect to regional, national and international resource sharing. WILCO is administratively located at the Western Interstate Commission for Higher Education (WICHE), Boulder, Colorado, and incorporates the former Continuing Education and Library Resources Program of WICHE.

III. CONCEPT OF THE INTEGRATED BIBLIOGRAPHIC COLLABORATIVE

Over the next three years, the activities undertaken by the various organizations involved in western library cooperation should lead to increased integration of resource sharing components: bibliographic data, communications systems, bibliographic utilities, service centers, and library resources. This process will begin to make available to the West an effective and efficient bibliographic collaborative that is coordinated with the evolving national system, and that supports and extends regional library cooperation and resource sharing. The current concept of what these collaborative activities might achieve in these three years envisions:

- The computers of bibliographic utilities (WLN, BALLOTS, OCLC, LC and perhaps others, such as the University of Chicago) will be in the course of being linked to allow on-line access to files and the transmission of needed records from one to another. Users may tend to select a particular utility for the bulk of their bibliographic service needs. Each utility will remain a free and autonomous agency. An economical telecommunications network meeting the communications needs for libraries may be in development.

- Access to the utilities may be supported by state or multistate service centers, or "library networks," much as is currently the pattern in accessing OCLC. In the West, there may be at least four such centers (PNBC/WLN, CLASS, BCR and AMIGOS) each of which will serve states and individual libraries in a pattern consistent with efficient and effective service training, maintenance, etc. Users will probably contract with a service center for processing support from one particular utility, but may also be able to search the data base of other utilities. Centers may arrange with each other to obtain assistance in delivering products and services. Some utilities may serve some users directly rather than through a service center.

- Each utility will maintain as large a bibliographic data base as needed to support its users. There may be a movement towards maintaining infrequently used bibliographic records in a national file to reduce the burden of storing and processing unneeded records at each utility. There will be a movement toward coordination (nationwide) of bibliographic record creation and coverage of unique and non-print resources.

- It may be more economical in the future to maintain records of libraries' holdings in files separate from cataloging data, but linked to the latter by means of a unique identifier such as the LC card number. Holdings records may be maintained at local (e.g., circulation control files), state (e.g., state union catalogs), regional (e.g., service center files), or central (e.g., files at the utilities) locations. This distribution of holdings files should support local and state resource sharing and minimize non-essential interstate loan requests.

- Increasingly, bibliographic verification and the location of recently-published materials for the purposes of interlibrary loan will utilize union catalogs of state or multistate holdings. While the union catalog may be maintained on-line by a utility, other forms such as microfiche) of the catalog could be produced for widespread use by libraries without terminals. In one or more localities, it may also be possible to search the circulation control files of individual libraries to determine the availability of material for loan before transmitting an ILL request. A computer-based message switching capability may be under development for automatically transmitting ILL requests.

Because of the rapid evolution of the bibliographic collaborative as technology changes and new ideas appear, this general concept will need frequent updating and restatement to remain serviceable as a guide for coordination and development of the collaborative. A three-year time frame was selected for the tasks described in this document, rather than the more common five-year time frame for planning, because library networking is evolving so fast. The general concept is an optimistic forecast of where networking may be, and in what directions it may be moving, three years from now.

IV. GOALS AND STRATEGIES FOR ACCOMPLISHING THEM

The development of the bibliographic collaborative envisioned for the West over the next three years revolves around the following goals and their associated tasks. The goals listed are those for the integrated bibliographic collaborative representing all segments of the western library community, and are not per se goals just for guidance of WILCO or any other organization. In these goals, the western library community speaks as a whole. Most of the tasks to accomplish the goals have to be carried out by organizations other than WILCO. These organizations are asked to commit their resources to accomplish mutually agreed upon objectives for strengthening regional and national capabilities for providing every citizen full access to available information resources.

GOAL 1: IMPROVE THE EFFECTIVENESS OF THE ORGANIZATIONS CONTRIBUTING TO THE DEVELOPMENT OF REGIONAL AND NATIONAL RESOURCE SHARING SYSTEMS.

The State Librarians of the West constitute the most logical group to coordinate interstate library cooperation. They are responsible for improving the level of service provided to all a state's citizens by all types of libraries, and they have traditionally supported regional services such as PNBC and BCR. However, the directors and staff of the region's libraries, service centers and utilities, having the direct responsibility for serving their patrons and users, must participate in decision-making affecting state and multistate resource sharing. WILCO can be the vehicle through which the Western Council can provide the forum for discussion and agreement by all organizations concerned in state and multistate activities leading to coordinated and effective interstate and national sharing of library resources as envisioned in the program proposed by the National Commission on Libraries and Information Science.

All but the last two tasks listed under this goal are ongoing or on-demand in nature, rather than discrete activities with a specific beginning and end.

Tasks:

1.1: The bibliographic utilities and service centers are invited to work with the Western Council and WILCO staff in developing this regional bibliographic collaborative concept and plan throughout the next three years.

1.2: The Western Council will include representatives from key western libraries of all types, service centers and utilities in making policy decisions affecting resource sharing. The Council will designate advisory groups and sponsor task forces as needed.

1.3: On a continuing basis, the WILCO staff will monitor and report the activities and plans of the organizations involved in the regional and national systems. The Western Council will sponsor the WILCO newsletter with 8 to 12 issues each year as a means for communicating the current status of networking activities to all persons interested. The regional bibliographic collaborative concept and plan (as begun with this document) will be modified as necessary and reissued.

1.4: The Western Council (and its advisors) will meet on a regular basis to review the current status of coordination efforts and to identify current priorities.

1.5: The Western Council will sponsor meetings that advance the purpose of system coordination and integration, and particularly those meetings described in other tasks.

1.6: Under guidance of the Western Council, the WILCO staff will assist states, as requested, in developing continuing education programs that address how library managers and staff should make most effective use of current and projected capabilities of the evolving bibliographic collaborative. WILCO will acquire or develop training packages to assist library managers and staff to plan and carry out the organizational and operational changes necessary to take best advantage of computer-based services and improved interlibrary loan capabilities.

1.7: The WILCO staff will consult and advise, as requested, with the libraries and other organizations that are western components for the national library and information network proposed by NCLIS.

1.8: The WILCO staff will assist the Western Council and other librarians in informing state and local library boards about the significance, costs and benefits of library networking in improving information services for all citizens.

1.9: WILCO will:

- provide a region-wide forum for planning and cooperation;
- identify specialized expertise in the region and facilitate access to this expertise;
- provide a clearinghouse for information on new technologies, available systems and services as well as on continuing education offerings;
- provide an established mechanism to address problems of and propose solutions for improving resource sharing, continuing education, data collection for planning purposes, and library cost analysis;
- facilitate regional research and development programs to reduce redundant development and identify needed areas of research;
- assist the utilities, service centers, state agencies and regional library organizations in developing a cost-beneficial strategy for building compatible and distributed machine-readable data bases; assist in determining the most effective and cost-justifiable mix of access to the data (on-line, fiche, etc.);
- identify telecommunications facilities, computer capabilities and data bases available in the West; help to identify ways of extending the cost-effective use of these aids by libraries in the West;
- play a coordinating, facilitating, communicating and experimenting role in the areas of continuing education for library personnel and resource sharing.

1.10: The Western Council and WILCO staff will investigate advantages and disadvantages of an interstate library compact among the western states to serve as a long-range vehicle for the bibliographic collaborative.

1.11: Under terms of a grant from USOE, WILCO will develop statistical indicators (consistent with national standards for library statistics) for measuring system performance and for providing data needed for planning. The WILCO staff will collect, analyze, and maintain needed data, and will assist other organizations in making use of data and analytical findings.

Impact:

Library service for western citizens is hampered by the uneven distribution of population, the great distances between communities, the scarcity of information resources in many areas, and the steeply rising cost and volume of library materials. These problems can be alleviated if western libraries, service centers, and utilities coordinate their plans and activities so that the western states can help themselves and each other to make better use of library resources -- both human and material -- that are available in the region. WILCO can provide both the forum in which all the organizations concerned with resource sharing decide what coordination is necessary and support for those organizations in carrying out the decisions.

GOAL 2: DESIGN AND DEVELOP A PROTOTYPE TELLECOMMUNICATIONS NETWORK THAT INTERCONNECTS THE BIBLIOGRAPHIC UTILITIES, SERVICE CENTERS, AND WESTERN LIBRARIES.

Strategy:

Libraries need cheaper and better telecommunications if they are to be able to gain the most advantage from computer-based services and from sharing each other's material and human resources. Current minicomputer and communications technologies provide the capability for creating a telecommunications system that will allow libraries economically to transmit/receive data, both among themselves and between themselves and the various computers around the country that support library operations.

Some service centers intend to install minicomputer data concentrators to which the lines to OCLC will connect. (NELINET already has one installed and is on the verge of completing contractual arrangements with OCLC.) The Research Library Group (RLG) and LC have been funded to design an interconnection between their computers, eventually via minicomputer front ends that would be telecommunications processors. Planning for the use of these minicomputers--their technical configurations, operating programs, and standardization of message protocols -- should be coordinated both to ensure compatibility and to reduce development costs. Immediately, the technical staffs of the

utilities and service centers should begin continuing discussions on their plans for telecommunications. A national task force should be established to perform system analysis and design, including the completion of standards affecting transmission of library data and messages, leading to development of a minicomputer-based library telecommunications network. While such a network is being created, the utilities and service centers in the West should establish their own task force to deal with the efficient current use of the region's communications system in providing access to the utilities.

Tasks:

2.1: WILCO will host one or more meetings among librarians and representatives of utilities and service centers to review user and technical requirements, problems, and plans for library telecommunications service in the West, and to generate one or more grant proposals for interconnecting utilities and service centers via telecommunications.

2.2: WILCO, the utilities, and the service centers will urge and participate in the establishment of a national task force to develop standards for library telecommunications messages and protocols, to define a nationwide system for interlibrary communication, and to coordinate design and development of components of that system. WILCO will explore the similarity of library telecommunications requirements with requirements of other governmental agencies in the West to determine the need for interagency coordination.

2.3: BALLOTS and WLN, when RLG and LC are ready, may install a direct computer-to-computer connection based on the Phase I RLG/LC project design to allow each utility (and its users) to access LC files for purposes of searching and copying LC records to the utility's file via telecommunications. Such a project should include user evaluation of the benefit of such a capability.

2.4: One service center and one utility may, as a pilot test, develop a data concentrator to reduce costs for data communications between the center and the utility. The concentrator could probably be similar to that being developed by NELINET for connection to OCLC. Should the pilot test be successful, additional concentrators may be installed at other service centers and a pilot test may be performed to provide a concentration capability between one service center and multiple utilities.

2.5: The bibliographic utilities, in consultation with the service centers, may collaboratively plan a communications interface for mutual access to each other's files and exchange of data. As an interim capability before on-line transmission between utilities, BALLOTS, OCLC, and WLN, with advice from the service centers, may provide the capability of access to their files from dial-up terminals used for searching purposes (as distinct from cataloging or other processing purposes) and for allowing users to identify records to be transferred from the files of one utility to the files of another via records output in MARC format on tape.

Subsequent to this activity and to the project described in Task 2.3, BALLOTS and WLN may install a telecommunications-based interconnection between the two computers.

2.6: WILCO and two or more western libraries using minicomputer-based circulation control systems will investigate the feasibility of system interconnection along the lines of the project being carried out in the North Suburban Library System of Illinois.

2.7: WILCO will investigate (in conjunction with other organizations and projects) the feasibility of using satellite communications for long distance transmission of library data.

2.8: BALLOTS, OCLC and WLN, in conjunction with the service centers and perhaps with other utilities, should determine the design and development tasks which would be required to provide users with:

a) the ability to use their own terminals to access other data bases;
b) standard language and user protocols to search each utility's data base.

Impact:

Better telecommunications service and interconnection of the bibliographic utilities so that a library has access to the files and programs of more than one system are almost totally inter-related aspects of a top priority need for library networking. The West can - and should - move as rapidly as resources of funds and people can be obtained to link WLN and BALLOTS to LC. Links with OCLC must also be developed so that the users of that system have access to the WLN, BALLOTS and LC files. Data concentration and message switching hardware and software can provide the means for establishing the necessary links while providing much more powerful - and perhaps cheaper - communication among libraries for data transmission, inter library loan, reference and conferencing than existing teletype and telephone circuits.

With interconnection and better telecommunications, a library in the Northwest could, as an elaborate example:

a) search the OCLC file and have a catalog record transferred to WLN;
b) use the transferred record as the basis for placing an order using the WLN acquisition system;
c) transmit an ILL request for the item for use until the order is filled;
d) complete cataloging for an item when received, using WLN.

GOAL 3: STRENGTHEN AND EXTEND THE CAPABILITIES OF THE EXISTING AND POTENTIAL SERVICE CENTERS FOR:

a) ACTING AS DISTRIBUTORS FOR THE UTILITIES AND CONTRACTING FOR BIBLIOGRAPHIC PRODUCTS AND SERVICES FROM VARIOUS SOURCES;

b) PROVIDING CENTRALIZED PURCHASING OR CONTRACTING FOR NETWORK RELATED EQUIPMENT, MAINTENANCE AND COMMUNICATIONS SERVICES;

c) REPRESENTING USERS TO THE UTILITIES IN IDENTIFYING NEW OR DIFFERENT PRODUCT AND SERVICE NEEDS;

d) TRAINING USERS OF COMPUTERIZED SERVICES; AND

e) PARTICIPATING IN ASSISTING STATES AND INDIVIDUAL LIBRARIES IN RESOURCE SHARING ACTIVITIES.

Strategy: Each service center will establish its own set of tasks and schedules for accomplishing some or all of the goals. Service centers may assist other centers in carrying out these activities. On request, WILCO will provide advice and assistance to service centers in improving and meshing their capabilities.

Tasks:

3.1: The service centers may assist each other in providing descriptive materials for utility products and services to allow potential library users to decide whether or not to use them.

3.2: Service centers may contract with each other as desirable to provide their users with capabilities not currently available. Users will seek services first from their traditional or nearest service center.

Impact:

Any library in the West should have an appropriate service center through which the library can obtain necessary support and assistance in procuring networking products and services, rather than having to negotiate contracts individually with the bibliographic utilities. Users may benefit from economies made possible through service center purchasing and network management functions.

GOAL 4: DEVELOP AND IMPROVE THE CAPABILITIES OF THE BIBLIOGRAPHIC UTILITIES TO SUPPORT LIBRARIES WITH AUTOMATED SERVICES AND PRODUCTS, AND TO PLAN FOR PARTICIPATION IN THE NATIONAL BIBLIOGRAPHIC SYSTEM.

Strategy: WLN, OCLC and BALLOTS, jointly and with assistance from the service centers, should develop and extend their capabilities to provide services and products to western libraries.

Tasks:

4.1: WLN, OCLC, BALLOTS and the service centers, with WILCO assistance as requested, should hold a series of information meetings to explore thoroughly the details of communications lines and services, terminal equipment, and user training needed to extend their services in the region.

4.2: The utilities may need to minimize storage and processing costs by maintaining in their own files only those bibliographic records (such as current MARC records) likely to be used by their clients. Clients will occasionally need rapid access to records not available in a utility's file. WLN, BALLOTS, OCLC and LC should discuss plans for disposition and storage of catalog records (such as those obtained via COMARC) that are not likely to be used by the clients of a particular utility.

Impact:

Western librarians and library patrons should enjoy the benefits provided by the utilities at the earliest opportunity. The utilities should take advantage of each other's experiences and planning in order to speed up the improvement and extension of their capabilities, products and services.

GOAL 5: MAINTAIN HIGH STANDARDS OF QUALITY IN CATALOG RECORDS INPUT TO UTILITIES' FILES BY WESTERN LIBRARIES.

Strategy: All users will be expected to input high quality catalog records, adhering, where possible, to established national standards. The utilities should provide a capability for managing several authority files to support needs of special, public and school, as well as academic libraries. Machine-readable cataloging data available from other sources (e.g., LC, another utility) should be acquired by a utility as needed by users.

Tasks:

5.1: A task force consisting of representatives of various types of libraries, the service centers and the utilities should be formed to help in the development of national standards for the content and quality of bibliographic records input to a utility's data base by western libraries.

5.2: WILCO, in conjunction with the task force, will explore ways of providing incentives to libraries with a significant volume of acquisitions to perform their original cataloging input to a utility's file in accordance with national standards.

5.3: States should evaluate internal needs and means for funding the initiation of BALLOTS, WLN or OCLC service in key libraries in the state that agree to input original cataloging in accordance with national standards, in accordance with the schedule for availability of service. WILCO will assist the state in developing incentives for libraries to contribute existing machine-readable records to regional data bases.

5.4: BALLOTS, OCLC and WLN, with advice from users, should evaluate the utility of adding files representing special collections such as that of NICEM for AV educational materials, to the cataloging data base and loading selected available files already in machine-readable form.

5.5: A task force should be formed to establish multiple authority structures that meet special user needs, and to investigate the impact on utilities and service centers. Responsibility should be assigned to a specific organization as the manager for each authority file and its coordination with other authority files. Since each authority list should be at least de facto a national standard, each designated agency should have national standing or recognition. The Western Council, service centers, and the library associations in the region should seek the establishment of such standards and the designation of responsible agencies.

Impact:

This goal is aimed at maintaining cataloging data bases at a high level of quality without introducing delays in making new records available to other users, while at the same time acknowledging the differing requirements for cataloging standards among diverse types of libraries. Since computer technology provides the capabilities needed for supporting quality control and standardization, as well as for use of multiple ways of searching for particular record, western librarians should take advantage of these capabilities. As a whole, the West is sufficiently large to be able to influence national standards and to set interim standards for its own use as needed to make computer-based cataloging support more effective.

GOAL 6: CAPTURE AND PROVIDE ACCESS TO HOLDINGS DATA REPRESENTING THE CURRENT ACQUISITIONS OF WESTERN LIBRARIES, CONSISTENT WITH EXISTING AND DEVELOPING RESOURCE SHARING PLANS.

Strategy: The accumulation of current holdings data should be coordinated by a responsible agency on a state or multistate basis. For libraries in each state currently using machine-readable cataloging, either through OCLC, BALLOTS or WLN, or obtaining cards or fiche catalogs from a commercial vendor, a machine-readable copy of new records should be acquired. These records can be maintained by a utility, service center, state institution or vendor, and used to publish a variety of products for wide distribution in each state or multistate region. Cataloging data representing the breadth of current acquisitions among western libraries might be added to the file of some utility if not already contained in a data base.

Tasks:

6.1: The service centers and WILCO should immediately encourage each state to begin planning to capture holdings information in machine-readable form on current additions to the collections of key libraries and to produce state holdings lists. The lists should provide search points by author, title and subject, and ought to be compatible for potential merger with other state or multistate lists.

6.2: State library agencies should begin planning for inviting libraries within their state to contribute holdings data. The agencies should also arrange for funding sources as needed for production and use of the lists on microform or other medium.

6.3: WILCO will assist state library agencies, service centers, and resource libraries in evaluating the utility of the state-based holdings lists. The first evaluation will be addressed to questions about the value of microfiche lists as compared to on-line file searching, which libraries are most useful to have represented in the lists, and optimal combinations of states and types of libraries in a single list.

6.4: WILCO will actively encourage the formation or progress of national committees to work on standards for the form for library identifiers, holdings statements, and unique identifiers for records without an LC card number. WILCO will seek western representation on national committees or groups discussing these standards.

6.5: The state agencies, service centers, or utilities should arrange to acquire on a regular basis the new catalog and holdings records generated by western libraries using utilities or commercial vendors. These records should be used in immediately building state/regional union finding lists and on-line holdings files.

Impact:

At a time when the cost of maintaining union card catalogs for location information has reached a questionable level, technology has provided a cheaper and more effective tool. In many western states, the major libraries are already obtaining cataloging records from machine-readable sources. These records can be cheaply, easily, and frequently merged to provide an immediately useful union catalog of recent acquisitions that can be distributed throughout the state as well as being maintained on-line and that would replace the current practice of sending an extra main entry card to a union card catalog for filing. When seeking to borrow a recently published item, requesting libraries could quickly scan the union catalog to find what other library holds the desired material, and verification would be essentially automatic rather than the occasionally time-consuming chore it now is.

GOAL 7: COLLECT AND PROVIDE ACCESS TO RETROSPECTIVE HOLDINGS DATA FOR KEY RESOURCE LIBRARIES AND SPECIAL COLLECTIONS IN EACH STATE, CONSISTENT WITH STATE AND MULTI-STATE PLANS FOR RESOURCE SHARING.

Strategy: Selected holdings data reflected in bibcenter and machine-readable catalogs or inventory control files in various libraries (designated for each state) may be collected, cumulated, and merged with current holdings data files developed under Goal 6. Holdings data records will be linked to corresponding bibliographic records by LC card number or other standard identifier. Cumulation will be done as a stepwise process rather than in one costly fell swoop so that cost-effectiveness can be evaluated along the way, and before any major conversions of manual files are made solely for the purpose of obtaining holdings data.

Tasks:

7.1: In consultation with the identified key resource libraries, WILCO will recommend a policy concerning what items should have holdings data recorded in regional files and how the files should be updated as items become lost, weeded, or transferred to another library.

7.2: One or two states will identify which libraries should be included in the retrospective holdings lists to be produced as a first step, and will make necessary arrangements with service centers, utilities, or vendors to obtain the data and merge it with the current holdings data files. This task should make maximum use of existing machine-readable records.

7.3: The retrospective holdings file created as a result of the preceding task will be made available for use and evaluation through one of the utilities or service centers. WILCO will assist the one or two test states in evaluating the costs and benefits of retaining on-line access to the retrospective holdings and of adding the holdings of other libraries in the test states and of libraries in other western states.

7.4: As libraries that are contributors to manual union catalogs shift to report their holdings in machine-readable form, the manual catalogs should be closed and their final disposition determined. Before any money is spent in manual file conversion, the cost-benefit of the conversion must be demonstrated in comparison with other access methods for the data such as distributed microform copies of the file or continuing to engage a staff of file searchers to answer location requests for older materials. Plans for retrospective conversion of any one file shall consider region-wide needs and the impact on other union files.

Impact:

This is a low risk approach to the gradual accumulation of retrospective holdings data needed for interlibrary loan. The location function

of a bibliographic record is distinguished from the cataloging function. This means that records used for location purposes need not be the same as those used for cataloging; thus holdings data, for convenience and economy, can be maintained in local or subregional files rather than in the utilities' data bases, and skimpy or partially inaccurate cataloging data can be tolerated. Service centers or states could maintain holdings files for libraries in their area, with the communications system providing access to other holdings files.

GOAL 8: DEVELOP AND ADOPT POLICIES AND PROCEDURES AFFECTING RESOURCE SHARING TO MAKE THE MOST EFFECTIVE USE OF THE CAPABILITIES PROVIDED BY LIBRARY NETWORKING.

Strategy: Availability of networking services and products, showing which libraries have what materials, provides opportunities for states to set a standard of self-sufficiency (to reduce costs and delays of resource sharing), allow patrons access to a wider variety of materials, speed the delivery and return of borrowed materials, lower interlibrary loan and other resource sharing costs, and set up cooperative acquisition agreements.

Tasks:

8.1: The WILCO staff will assist each member state library agency at its request to monitor the interlibrary loan and other resource sharing activity in the state, on a sampling basis, to identify areas in which service could be improved or costs reduced and to assess the impact and effects of the availability of holdings and cataloging data.

8.2: BALLOTS, OCLC, WLN, and the service centers, should, as a part of their task to develop a communications network, design as well a message switching capability for ILL. With this capability in place, a borrowing library should be able to search the on-line catalog file (at whatever set of utilities the file may be distributed) to verify the citation, then be automatically transferred to the holdings file for the region to discover which library has the desired item. The system should then automatically generate a loan request and transmit it to the lending library, consistent with mutually agreeable interlibrary loan protocols and policies. Alternatively, if the lender has a circulation control system, the borrower should be able to access that system to determine the item's availability and to check it out or reserve it. (This task is not likely to be completed within the three-year time frame.)

8.3: WILCO staff will investigate the technical, economic, social and political consequences of current and alternative policies for interstate library resource sharing and will recommend policies to reduce costs, improve access to information, and compensate for imbalances between net-lending and net-borrowing states and major institutions .

8.4: WILCO staff will assist service centers, in conjunction with using and resource libraries, in obtaining or developing improved document delivery and photocopying services.

Impact:

Widespread access to holdings information may affect patterns and costs of interlibrary loan. The centralized or hierarchical ILL networks now in existence help to spread the lending load among libraries, but at an additional cost. When a requesting library can determine for itself who else has a desired item, there is a possibility that the lending load may not be spread equitably, but the total cost for ILL may be reduced since fewer messages will be required to complete a transaction and verification can be accomplished more easily.

V. ASSUMPTIONS

This view of the goals and tasks for western libraries and networking components over the next three years is posited on a number of assumptions about the shape of the resource sharing environment during that time. These assumptions must be re-examined frequently because they are likely to change greatly as time goes on, and the changes may affect the completion of the initial set of tasks.

The assumptions are as follows:

1. No agency will be able to constrain the autonomy of utilities, service centers, or libraries using network services. A relatively free market economy will operate so that users will react to price and service factors in deciding what network products and services to purchase, and from whom.

2. Three bibliographic utilities, BALLOTS, OCLC and WLN, do or in the near future will have on-line bibliographic systems supporting cataloging and other operations such as acquisitions and serials control. This computer-based support is available to libraries in some or all of the western states.

3. The utilities may be impelled to interconnect because of economic factors and the need to provide access to holdings of many different libraries.

4. Users are likely to demand the capability to use more than one utility, with the same terminal and similar procedures and protocols. This interface will be provided to a degree by the minicomputer systems used to interconnect the utilities. (To provide this capability completely will likely require a redesign and reprogramming of major portions of the utilities' software.)

5. It is not economical for all the utilities to process and store all nationally distributed catalog records (except possibly for recent MARC records), or to maintain large numbers of unused records in on-line storage.

6. Circulation transaction control can be performed most economically with local computer equipment, particularly the equipment that can support local functions in addition to circulation control. It is assumed that in the future local circulation systems and utility cataloging systems will be interconnected.

7. The number of minicomputers installed in libraries may double by 1979.

8. LC files may be accessible for on-line searching; MARC in 1978 and the Automated Process Information File (APIF) and Subject Headings in 1979-80.

9. A single national cataloging data base will not be available, but by the end of 1979 older MARC and COMARC records will be available from LC files.

10. A single national holdings data base is not economically justifiable. Regional or type-of-library subsets, however, are.

11. Libraries participating in on-line cataloging systems will be expected to assume the responsibility of inputting bibliographic records in full MARC format to the best of their ability. Some utilities will have quality control procedures to assure record quality; WLN is one such system.

12. Among the OCLC, LC, BALLOTS and WLN set of utilities, probably only WLN and LC will provide authority control mechanisms in their own computer systems within the next few years. The other utilities may use the LC authority control system via interconnection.

13. While we cannot predict the uses that will be made of the LC authority files, we can predict that the impact will be great. The capability of easy access to LC authority files may have wide-ranging implications for future maintenance of catalogs.

14. The bibliographic utilities may find it desirable to encourage users to access the utilities via service centers.

15. Service centers will likely handle access to more than one utility.

16. As more libraries use automated cataloging it will no longer be necessary to maintain manual bibcenter files for current acquisitions.

17. Some service centers by 1978 will be planning for, or have, minicomputer systems for data concentration and message switching.

18. In addition to on-line files there will be value in having bibliographic and holdings information available in other forms, such as microfiche.

19. Librarians will urge that computer terminals in their libraries be multi-functional and able to connect to any utility.

20. Telecommunication services commercially available will change greatly as new companies, services and rates appear.

21. A national library network plan will evolve as a result of utility, service center, state and regional planning, in conjunction with LC and NCLIS.

22. There will tend to be a geographical hierarchy for data base development and resource sharing.

23. States will increasingly strive for self-sufficiency in terms of information access.

24. Some states will maintain union catalogs in support of interlibrary loan, using the data and technology provided by vendors, the utilities, or local data processing centers.

VI. SCHEDULES

During the remainder of 1976, the tasks agreed upon as a result of discussion of this document will need to be described in greater detail and scheduled by the parties concerned in accord with the priorities of each party. At the national level, the Library of Congress, in concert with NCLIS, CLR, and other library groups, is engaged in determining how LC should contribute to the development of library networking. National priorities need to be balanced with regional, state, and individual organizations' priorities. WILCO and its staff will assist western and national organizations at their request in preparing detailed work plans for activities that affect more than one organization.

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